# IN THE LEVITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Anthony C. Zuppero et al. Art Unit: 1753

Serial No.: 10/625,801

Examiner:

Diamond, Alan D.

Filing Date:

July 23, 2003

Date:

February 9, 2005

TITLE: GAS SPECIE ELECTRON-JUMP CHEMICAL ENERGY CONVERTER

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

#### **INFORMATION DISCLOSURE STATEMENT**

#### SIR:

1. In accordance with the duty of disclosure under 37 C.F.R. § 1.56 and in conformance with the procedures of 37 C.F.R. § § 1.97 and 1.98 and M.P.E.P. § 609, attorneys for Applicants hereby bring the following references, which are listed on the attached modified PTO Form No. 1449 to the attention of the Examiner. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

#### CERTIFICATE OF TRANSMISSION

I hereby certify that this correspondence is being facsimile transmitted to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, Group Art Unit 1753 at (703) 872-9306 on February 9, 2005.

Amelia Finker

NYCDMS/434451.1

2. Applicants respectfully request that the following co-owned patents and co-pending applications be considered and made of record in the present application:

US Patent Nos. 6,114,620 (cited on PTO-892 by the Examiner); 6,218,608 (cited on PTO-892 by the Examiner); 6,222,116 (cited on PTO-892 by the Examiner); 6,268,560 (cited on PTO-892 by the Examiner); 6,327,859 (cited on PTO-892 by the Examiner); 6,700,056 (cited on PTO-892 by the Examiner); 6,678,305 (cited on PTO-892 by the Examiner); 6,649,823 (cited on PTO-892 by the Examiner); and US Patent Application Nos. 09/682,363 (cited on PTO-892 by the Examiner); 10/218,706 (cited on PTO-892 by the Examiner); 10/185,086 (cited on PTO-892 by the Examiner); 09/631,463; 10/759,341; 10/052,004 (cited on PTO-892 by the Examiner). The references cited in each of those patents and applications are listed on Form 1449 accompanying this information disclosure statement.

- 3. Copies of the references listed on the modified PTO form 1449 will follow under separate cover by first class mail due to their volume.
- 4. This information disclosure statement is being filed under 37 C.F.R. § 1.97(b)(4), before the mailing date of a first Office action after the filing of a request for continued examination under §1.114.
- 5. No fee is deemed necessary with the filing of these documents. If a fee is deemed necessary, we authorize the Commissioner of Patents and

6. Trademarks to charge Deposit Account No.: 02-0393.

Respectfully submitted,

Eunhee Park

Registration No. 42,976

BAKER & McKENZIE

805 Third Avenue

New York, NY 10022

(212) 751-5700 telephone

(212) 759-9133 facsimile

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Complete if Known

Anthony C. Zuppero

10/625,801

7/23/2003

#### INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Art Unit 1753 (Use as many sheets as necessary) **Examiner Name** Alan D. Diamond Attorney Docket Number 22122878-70

**Application Number** 

First Named Inventor

Filing Date

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Translation is attached.
This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments and trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND

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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction A ts are required to respond to a collection of information unless it contains a valid OMB control number. Substitute for form 1449/PT Complete if Known FEB 1 4 2005 3 **Application Number** INFORMATION DISCLO 10/625,801 Filing Date STATEMENT BY ARBI 7/23/2003 First Named Inventor Anthony C. Zuppero (Use as many sheets as Art Unit 1753 **Examiner Name** Sheet Alan D. Diamond Attorney Docket Number 22122878-70

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	<u> </u>	US- 20020070632		-	
	- 6	US- 4651324	06-2002	Zuppero et al.	
	7	US- 5337329	03-1987	Prein et al.	
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First Named Inventor	Anthony C. Zuppero
Art Unit	1753
Examiner Name	Alan D. Diamond
Attorney Docket Number	22122878-70

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STATEMENT BY APPLICANT	First Named Inventor	Anthony C. Zuppero
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	29	HARRISON et al., Population -Inversion and Gain Estimates for a Semiconductor TASER	-
	30	HARRISON et al., Theoretical Studies of Subband Carrier Lifetimes n an Optically Pumped Three-Level Terahertz Laser, Superlattices and Microstructures, Vol. 23, No. 2 (1998)	-
	31	HARRISON et al., Room Temperature Population Inversion in SIGe TASER Designs, IMP, School of Electronic and Electrical Engineering, The University of Leeds	-
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Examiner Initials	Cite No.1	OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS Include name of the author (in OAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue	Τ,
•	33		+
	'34	SUN et al., Intersubband Lasing Lifetimes of SiGe/SI and GaAs/AlGaAs Multiple Quantum Well Structures, Applied Physics Letters, Vol. 66, No. 25 (1995)	1
	35	SUN et al., Phonon Pumped SiGe/Si Interminiband Terahertz Laser	╁
	36	SOREF et al., Terhertz Gain in a SiGe/Si Quantum Starcase Utilizing the Heavy-Hole Inverted Effective Mass, Applied Physics Letters, Vol. 79, No. 22 (2001)	+
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Application Number	10/625,801	
Filing Date	7/23/2003	
First Named Inventor	Anthony C. Zuppero	
Art Unit	1753	
Examiner Name	Alan D. Diamond	
Attorney Docket Number	22122878-70	7

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/ Application Number

Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, megazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), number(s), number(s), number city and/or country where numbered.  CHOI et al., Ultrafast Carrier Dynamics in a Highly Excited GaN Epilayer, Physical Review B., Vo. 63, 115315 (2001)  DIEKHONER et al., Parallel Pathways in Methanol Decomposition on PT(111), Surface Science 409, pp. 384-391 (1998)  DEMIDENKO et al., Piezoelectrically Active Acoustic Waves Confined in a Quantum Well and Their Amplification by electron Drift, Semiconductor Physics, de PAULA et al., 10 23 Electron Tray, Vol. 3, No. 4, pp. 427-431-(2000)	te.	
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First Named Inventor	Anthony C. Zuppero	
Art Unit	1753	
Examiner Name	Alan D. Diamond	
Attorney Docket Number	22122070 70	

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Complete if Known				
Application Number	10/625,801			
Filing Date	7/23/2003			
First Named Inventor	Anthony C. Zuppero			
Art Unit	1753			
Examiner Name	Alan D. Diamond			
Attorney Docket Number	22122878-70			

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Application Number 10/625,801

Filing Date 7/23/2003

First Named Inventor Anthony C. Zuppero

Art Unit 1753

Examiner Name Alan D. Diamond

Attorney Docket Number 22122878-70

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<sup>&</sup>lt;sup>4</sup> Applicant's unique cliation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

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Attorney Docket Number	22122979 70			

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Application Number	10/625,801	
Filing Date	7/23/2003	
First Named Inventor	Anthony C. Zuppero	
Art Unit	1753	
Examiner Name	Alan D. Diamond	
Attorney Docket Number	22122878-70	7

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	1	HARRISON et al., The Carrier Dynamics of Far-Infared Intersubband Lasers and funable Emitters, www.ee.leeds.ac.uk/homes/ph/	22
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Application Number	10/625,801			
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First Named Inventor	Anthony C. Zuppero			
Art Unit	1753			
Examiner Name	Alan D. Diamond			
Attorney Docket Number	22122878-70	<u>-</u>		

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			PLICANT		Anthony C. Zuppero
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	174	US- 6,119,651 ·	09-19-2000	Anderson	· · · ·
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First Named Inventor	Anthony C. Zuppero	
Art Unit	1753	
Examiner Name	Alan D. Diamond	
Attorney Docket Number	22122878-70	

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Complete if Known **Application Number** 10/625,801 Filing Date 7/23/2003 First Named Inventor Anthony C. Zuppero Art Unit 1753 **Examiner Name** Alan D. Diamond Attorney Docket Number

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Examiner Name	Alan D. Diamond		
Attorney Docket Number	22122878-70		

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Application Number	10/625,801		
Filing Date	7/23/2003		
First Named Inventor	Anthony C. Zuppero		
Art Unit	1753		
Examiner Name	Alan D. Diamond		
Attorney Docket Number	22122878-70		

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS						
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Anthony C. Zuppero **Art Unit** 1753 **Examiner Name** Alan D. Diamond Attorney Docket Number 22122878-70

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Attorney Docket Number	22122878-70			

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INFORMATION DISCLOSURE	Application Number         10/625,801           Filling Date         7/23/2003
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Sheet 41 of 62	Examiner Name Alan D. Diamond

Attorney Docket Number

	U.S. PATENT DOCUMENTS					
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	1309	us. 6,232,546	05-15-2001	DiMatteo et al.	Figures Appear	
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Application Number	10/625,801		
Filing Date	7/23/2003		
First Named Inventor	Anthony C. Zuppero		
Art Unit	1753		
Examiner Name	Alan D. Diamond		
Attorney Docket Number	22122878-70		

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS				
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Alan D. Diamond

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STATEMENT BY APPLICANT	First Named Inventor	Anthony C. Zuppero		
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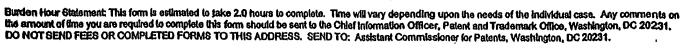
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Examiner Name	Alan D. Diamond	-
Attorney Docket Number	22122878-70	7

Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			
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		Application Number	10/625,801		
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Filing Date	7/23/2003		
		First Named Inventor	Anthony C. Zuppero		
		Art Unit	1753		
		Examiner Name	Alan D. Diamond		
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Art Unit	1753
Examiner Name	Alan D. Diamond
Attorney Docket Number	22122878-70

Examiner Initials*	Cite No.	Document Number Number-Kind Code <sup>2 (Finance)</sup>	Publication Date MM-DD-YYYY	DOCUMENTS  Name of Patentee or Applicant of Cited Document  Relevant Passages or Relevant Figures Appear
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	<u>3</u> 47	US-2003/0100119	05-2003	Weinberg et al.
<del></del>	348	US-2003/0030067	02-2003	Chen, Wei
	349	US-2003/0019517	01-2003	McFarland, Erick W.
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Attorney Docket Number	22122878-70	

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	361	WO 01/28677A1	04-2001	Zuppero et al.		
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4	Examiner Name	Alan D. Diamond
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	363	US- 2002/0121088 A1	+ 09-05-2002	- Zuppero et al.	Same as cite no. 177
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Shoot 50	Examiner Name	Alan D. Diamond
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Application Number	10/625,801			
Filing Date	7/23/2003			
First Named Inventor Art Unit	Anthony C. Zuppero			
Examiner Name	1753			
<b></b>	Alan D. Diamond			
Attorney Docket Number	22122878-70			

	7	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials	Cite No. 1	item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)	Application Number Filling Date First Named Inventor Art Unit	10/625,801 7/23/2003 Anthony C. Zuppero
Sheet 55 of 62	Examiner Name  Attorney Docket Number	Alan D. Diamond

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	Art Unit	1753	
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Include name of the author (In CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-Issue number(s), publisher, city and/or country where published.  DANIEL J. AUERBACH, Hitting the Surface Softly, www.sciencemag.org, Vol 294 Science, December 21, 2001, pp. 2488-2489.  Same as cite  M.D CUMMINGS AND A.Y ELE ZZABI, Ultarfast impulsive excitation of coherent longitudaL acoustic phonon oscillations in highly photoexcited InSb, 2001 American Institute of Physics, Volume 79, Number 6, August 6, 2001.  Same as ci  J.W. GADZUK, Resonance-Assisted Hot Electron Femotochemistry at Surfaces, National Institute of Standards and Technology, Gathersburg, Maryland 20899, Physical Review Letters, Volume 76, Number 22, May 27, 1996.  Same as ci  BRIAN GERGEN, HERMAN NIENHAUS, W., HENRY WEINBERG, ERIC W. McFARLAND, Chemically Induced Electronic Excitations at Metal Surfaces, www.sciencemag.org, Vol 294, December 21, 2001, Pgs 2521-2523.	te no. 62
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				Application Number	10/625,801
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Filing Date	7/23/2003
				First Named Inventor	Anthony C. Zuppero
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<u> </u>	F 7	1 1		Examiner Name	Alan D. Diamond
Sheet	5/	of	62	Attorney Docket Number	22122878-70

	,	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS		
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#### **INFORMATION DISCLOSURE** STATEMENT BY APPLICANT

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Complete if Known					
Application Number	10/625,801				
Filing Date	7/23/2003				
First Named Inventor	Anthony C. Zuppero				
Art Unit	1753				
Examiner Name	Alan D. Diamond				
· Attorney Docket Number	22122878-70				

			U. S. PATENT	DOCUMENTS	
Examiner Initials*	Cite No.1	Document Number  Number-Kind Code <sup>2 (7 known)</sup>	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
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